

## 48" DUAL FUEL RANGES

**48" Natural Gas Surface Burner Models: ZDP486ND, ZDP486NR, ZDP484NG**

**48" LP Gas Surface Burner Models: ZDP486LD, ZDP486LR, ZDP484LG**

**Note:** Both ovens have the same features.

**IMPORTANT NOTICE:** This information is intended for use by persons possessing adequate backgrounds of electrical, electronic, gas and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

### ⚠ WARNING: DISCONNECT POWER BEFORE SERVICING

Disconnect the range electrical power supply at the household distribution panel by removing the fuse or switching off the circuit breaker.

Shut off the gas supply in the gas line by closing the manual shut-off valve.

Shut off the range gas supply by closing the range shut-off valve located on top of the range, beneath the rear vent.

**IMPORTANT:** Reconnect all grounding devices. All parts of this appliance capable of conducting electrical current are grounded. If grounding wires, screws, straps, clips, nuts or washers used to complete a path to ground are removed for service, they must be returned to their original positions and properly fastened.

GAS SUPPLY REQUIREMENTS		
GAS TYPE	INCOMING PRESSURE TO REGULATOR	PRESSURE REGULATOR OUTPUT
Natural	6.0" to 14.0" W.C.P.	5.0" W.C.P.
L.P.	11" to 14" W.C.P.	10.0" W.C.P.

**⚠ CAUTION** — The cooktop, as shipped from the factory, is set for use with its intended gas. If you wish to use your cooktop with the alternate gas, you must first replace the orifices and convert the pressure regulator.

### GAS CONVERSION KIT

The gas conversion kit is located behind the front access panel at the bottom of the range.

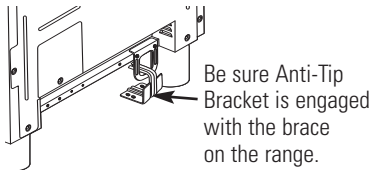
### HIGH ALTITUDE KIT

For operation from 3,000 to 7,000 feet, order WB28K10553 Conversion Kit. This kit includes orifices for both LP and Natural gas operation.

### ANTI-TIP DEVICE

The Anti-Tip Bracket must be properly installed to prevent tipping of the range. Failure to do so can cause serious damage or injury.

After servicing, roll the range into position, being careful not to entangle or pinch the power cord and flexible gas tubing. Make sure the Anti-Tip Bracket is engaged.



## REMOVE/REPLACE RANGE

To roll the range from its location for service, lower the range onto its wheels by retracting its four leveling legs.

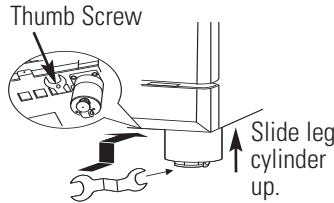
### FRONT LEVELING LEGS ADJUSTMENT

A leveling leg wrench is supplied. Reach under the front of the range near the right side. Locate and remove a thumb screw, then slide the wrench out of the slot.

Slide the front cylinders up to adjust the front leveling legs. Be careful not to damage the cylinder.

Use the supplied wrench to turn the front leveling legs. Turn clockwise to raise the range above the wheels. Turn counterclockwise to lower the legs.

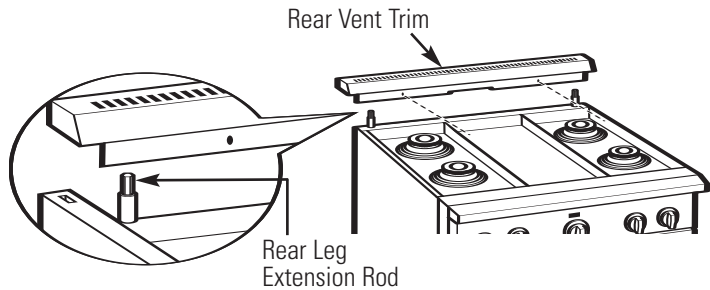
Be sure to return the wrench to its storage slot for future use.



### REAR LEVELING LEGS ADJUSTMENT

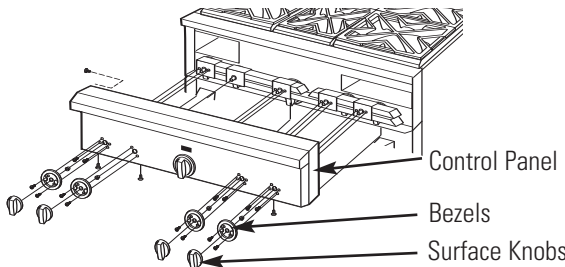
Remove the two screws from the rear vent trim. Slide the vent trim forward, then lift up to remove.

Find the two rear leg extension rods. Use a 1/4" driver or wrench on the extension rods to adjust the rear legs.



### CONTROL PANEL REMOVAL

Pull the surface knobs off and remove the screws from each bezel. Remove the screws from the control panel face. **NOTE:** Do not remove the oven control knob.

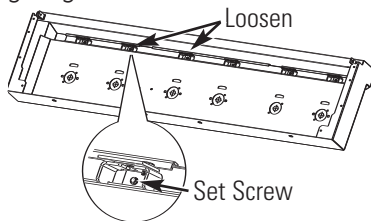


Remove the screws from the bottom of the control panel and from the top (inside flanges, on each side, on the back side of the panel).

### ACCENT LIGHTING REPLACEMENT

Remove the control panel. See the CONTROL PANEL REMOVAL section.

Loosen the accent lighting module's screw, slide out and replace.



## SURFACE KNOB INDICATOR LIGHT REPLACEMENT

Remove the control panel. See the CONTROL PANEL REMOVAL section. Find the indicator light on top of the gas valve, remove the attached screw and replace.

## GAS MANIFOLD AND VALVES REPLACEMENT

Refer to the Service Manual for replacement procedure.

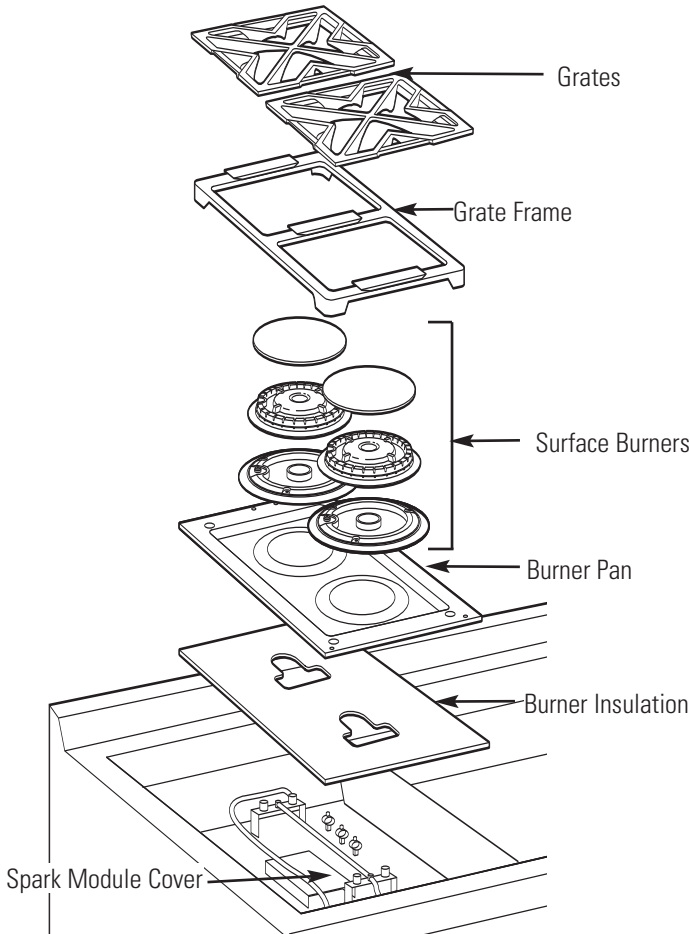
### OVEN CONTROL ACCESS

Remove the control panel. See the CONTROL PANEL REMOVAL section.

The oven control is mounted to the back side of the control panel.

### SPARK MODULE REPLACEMENT

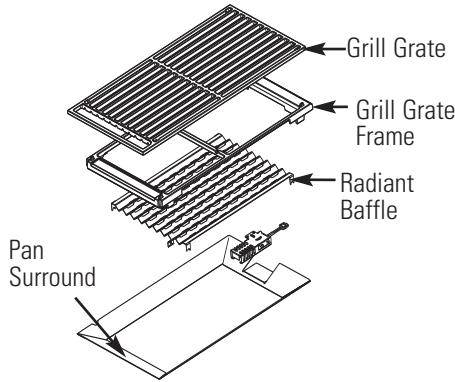
1. Roll the range from its installation position. See the REMOVE/REPLACE RANGE section.
2. Remove the control panel. See the CONTROL PANEL REMOVAL section.
3. Remove the two screws from the rear vent trim and remove the trim.
4. Remove the side range panel by removing the screws on the back of the range and the screws from the range face top inner corners, and then lift the panel up and off of its front keyhole mounting slots.
5. Remove the left grates and left grate frame. Remove surface burners by removing all screws, but keep the outside burner screws separate from the inside burner screws so they can be easily replaced. Remove the burner pan, burner insulation and spark module cover. Disconnect the igniter wires by pulling them off of the connector pins.



## GRILL IGNITER REPLACEMENT

Remove the grill cover, grate, grate frame and radiant baffle. Remove the screws from each side of the pan surround and remove the pan surround.

Remove the screws from the igniter and pull the igniter connector from the opening. Disconnect the connector pin and replace the igniter. Push the igniter connector back into the opening and replace all parts.



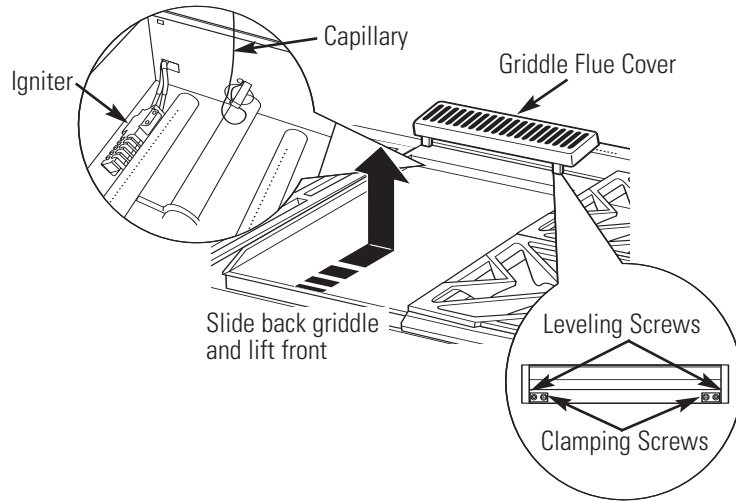
### GRIDDLE IGNITER REPLACEMENT

Lift off the griddle flue cover. Remove the 2 inside clamping screws. **NOTE:** Remove the 2 screws positioned on the inside only. Do not remove the outermost screws—they are for leveling the griddle.

Slide the griddle toward the rear and out of the hold-down tabs along the bottom front.

CAREFULLY lift and hold the griddle. A thermostat capillary is routed through a clip. Gently lift the griddle to one side and slip the capillary out of the clip. Do not disconnect or pull on the capillary. Gently lay the griddle aside.

Remove the 2 burner hold-down screws at the rear of the burner to loosen the burner. Remove the screws attaching the igniter. Pull the igniter connector from the opening, disconnect the pin connection and replace the igniter. Route the capillary back into the clip. Push the excess capillary back through the opening. Push the igniter connector back into the opening and replace all parts.



### GRIDDLE HIGH LIMIT SWITCH

This switch is located at the front of the griddle box inside the burner box. Refer to the Service Manual for further information.

**TAPE AREA**

MODEL NUMBERS  
ZDP486ND, ZDP486NR,  
ZDP484NG, ZDP486LD,  
ZDP486LR, ZDP484LG

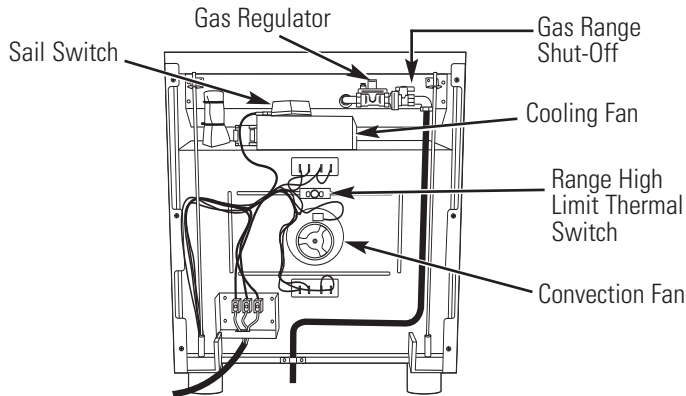
IMPORTANT  
SERVICE INFORMATION  
DO NOT DISCARD

31-14751 04-08 JR

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### SAIL SWITCH

The sail switch is located at the top rear of the range, above the cooling fan. To access it from the front, remove the top back vent trim. To replace it, remove the range back. This switch monitors the presence of the airstream from the cooling fan. If the fan malfunctions, the sail switch will open and disable power to the cooking elements.



### RANGE HIGH LIMIT THERMAL SWITCH

This switch is located above the convection fan motor. The range back must be removed to access it.

The high limit thermal switch is wired in series with the common side of all the elements, which are tied to the common side of the double line break relay. This switch is used to protect against element runaway. If this switch is tripped, the elements will not work for any operation.

### MOTORIZED DOOR LOCK

The motorized door lock assembly is located above the oven. The assembly consists of a lock motor cam and switch assembly, lock hook, mounting plate, door switch, spring and plunger.

#### Motorized Door Lock Operation:

The lock motor is energized when the control is set for Clean and Clean Time selected. The K13 relay contact

**Door Locking or Unlocking** will close and complete the circuit that supplies the voltage to the lock motor.

**NOTE:** To enable proper operation of the door lock, ensure that the door jamb switch is in

“common” to “normally closed” (door closed). This enables power to be delivered when the door lock closes.

- **CAM** – The cam on the motor performs two functions:

1. Positions the lock hook in the door to prevent opening during the Clean operation.
2. Operates the lock switches which tell the control if the door is unlocked or locked and ready for the Clean operation.

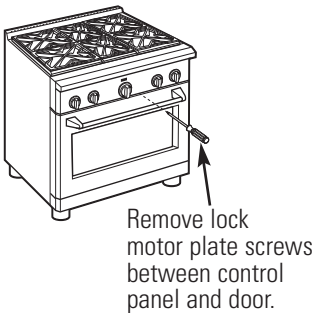
**NOTE:** When the door is either being locked or unlocked, both the lock and unlock switches will be in the open position. The LOCKED AND UNLOCKED diagrams are representative of a single oven. On double oven models, the diagrams apply to both models, except for the pin position (see OVEN SENSOR AND LOCK SWITCH OHMMETER TEST section for reference to double ovens).



### LOCKED DOOR REMOVAL

If the door is locked and cannot be unlocked, it may be removed for service by removing the lock motor plate screws between the control panel and door.

The lock motor assembly is then free to slide forward as you open the door.

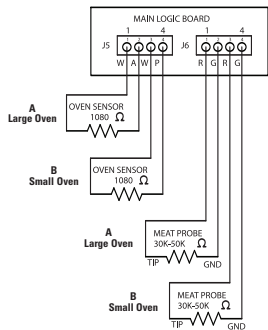


### OVEN SENSOR AND DOOR SWITCH OHMMETER TEST

See the **MOTORIZED DOOR LOCK** section for door switch function explanation. Remove power from the oven. Make the resistance measurement from the side of the sensor and lock switch connector with the exposed terminals.

#### DOUBLE OVEN

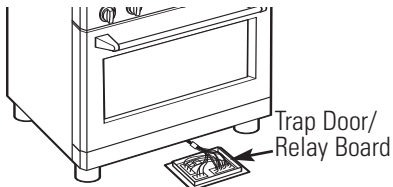
CIRCUIT	TERMINALS	OHMS
Oven Sensor A	1 to 2	1091Ω @ Rm Temp.
Oven Sensor B	3 to 4	1654Ω @ 350°F
Main Logic Board J5		2634Ω @ 865°F
Door Latched	1 (J17) to 3 (J16)	0Ω
Relay Board	1 (J17) to 4 (J16)	open
Door Unlatched	1 (J17) to 4 (J16)	0Ω
	1 (J17) to 3 (J16)	open



**NOTE: If an abnormal reading is observed, wiggle the leads at the disconnect block. If there is any variation, replace.**

### RELAY BOARD ACCESS

The Relay Board is located on the range bottom. Access it by removing the three 1/4" hex screws from the front edge of the trap door with a ratchet driver or short screwdriver. Pull the trap door/relay board down and forward. To replace, make sure to engage the rear tabs of the trap door and reattach the front screws.



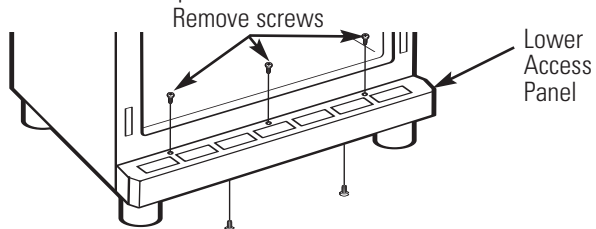
### FACTORY TEST MODE

The factory test mode can only be accessed during the first few seconds after the unit is powered up. To access the factory test mode, press and hold the Mini-Knob button within the first seconds of power-up. The options of the factory test mode are cycled through by pressing the Timer button.

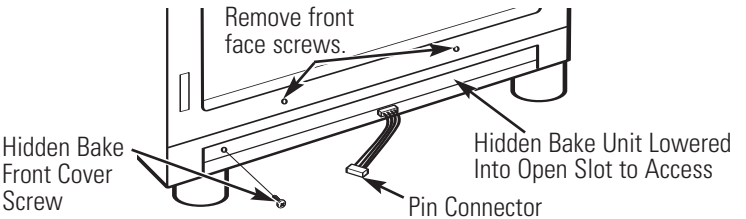
To exit the factory test mode, hold the Mini-Knob button for 3 seconds.

### HIDDEN BAKE

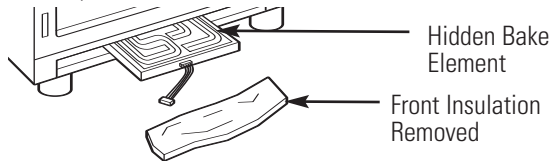
1. Remove the range door.
2. Lower the relay board access panel to provide needed clearance. See the RELAY BOARD ACCESS section.
3. Fully extend the front leveling legs down to provide needed clearance. See the FRONT LEVELING LEGS ADJUSTMENT section.
4. Remove the lower access panel.



5. Disconnect the pin connector.
6. Remove the screws from the front face of the range below the oven cavity to free the hidden bake assembly.
7. Reach into the open slot, grasp the hidden bake assembly and gently lower it so that it can be accessed.



8. Remove the screw from the hidden bake front cover and remove the panel by pivoting it from the opposite side slot.
9. Carefully remove the front insulation piece and slide the hidden bake element out to replace.



**IMPORTANT:** If the hidden bake assembly does not lower far enough to access it, make sure the relay board and front legs are sufficiently out of the way to provide adequate clearance. DO NOT TRY TO FORCE THE HIDDEN BAKE ELEMENT.

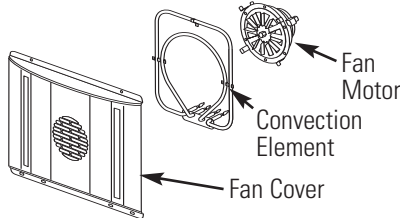
### CONVECTION ELEMENT AND FAN ASSEMBLY

The Convection Element and Fan Assembly are located on the back wall of the oven liner behind the panel with the screen in the center.

**NOTE:** On double oven models, the racks and rack supports will need to be removed to access the fan assembly on the small oven.

#### TO ACCESS CONVECTION ELEMENT:

1. Disconnect the power to the range; remove the oven door and oven racks.
2. Remove the 4 screws mounting the fan cover (2 on top and bottom) and pull forward.



#### TO REMOVE CONVECTION ELEMENT:

Remove the 3 screws mounting the element to the back wall. Pull forward and disconnect the wires.

#### TO SERVICE FAN:

The fan blade and convection fan motor can be replaced from inside the oven.

### ERC FAILURE CODES

The last 7 Failure (F) codes are stored in the nonvolatile memory, accessed through the factory test mode. All Failure (F) codes are suppressed from the display, except F2 and F9. To access the last 7 F-codes, follow these steps:

1. Enter the factory test mode by holding the Mini-Knob button during power-up.
2. Press the Timer button to cycle through the factory test mode options.
3. Find the F-code menu. The display will show “F-co”.
4. Press the Mini-Knob button to enter this menu.
5. Press the Mini-Knob button to cycle through F-codes. Press the Timer button to return to the factory test mode main menu.

FAILURE CODE	MEANING	CORRECTION
-F2-	Oven temperature Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched	<ul style="list-style-type: none"><li>• Welded relay contacts</li><li>• Airflow to rear of unit</li><li>• High resistance in oven sensor leads/connectors (especially at sensor in rear)</li></ul>
-F3-	Open oven sensor (over 2900 ohms)	<ul style="list-style-type: none"><li>• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be 1080 ohms at room temperature with 2 ohms per degree change.</li><li>• Look for damaged harness terminals if not a bad sensor.</li></ul>
-F4-	Shorted oven sensor (under 950 ohms)	<ul style="list-style-type: none"><li>• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be 1080 ohms at room temperature with 2 ohms per degree change.</li><li>• Separate sensor from harness to determine fault.</li></ul>
-F7-	Shorted key	Check logic display assembly. If rubber button pad is misaligned, correct; otherwise, replace control.
-F8-	EEPROM data shift failure	If repeated, replace.
-F9-	Cooling fan stalls or other cause of open sail switch	Suspect stalled cooling fan or airflow to control area.
-CX- -C1- -C4-	Communication Error	Check harness first and then replace component indicated by Cx Error Code.
-FC-	Door Latch Error	Inspect door latch and circuitry. Replace if switches are defective.

### SPECIAL FEATURES (Oven Thermostat Offset and Sabbath)

Push and hold the Timer button and Mini-Knob at the same time for 4 seconds until the display shows “SF” (Special Features).

Turn the Mini-Knob counterclockwise to access the oven thermostat offset mode. Press and turn the Mini-Knob to adjust the temperature offset from +35°F to –35°F. This only affects bake, convection bake and convection roast.

Turn the Mini-Knob clockwise to access the Sabbath mode. Press the Mini-Knob to select.

### CONTROL VOLTAGE

TERMINALS	VOLTAGE	NOTE: Temperature and Mode Selection necessary for operation of Relay contacts.
L1-N	120 VAC ALL THE TIME	NOTE: Voltage must be present across terminals L1 to N for control to operate.
L1-L2	240 VAC ALL THE TIME	

### GROUNDING SPECIFICATIONS

Ground Path Resistance	0.10Ω	Max.
Insulation Resistance	250KΩ	Min.

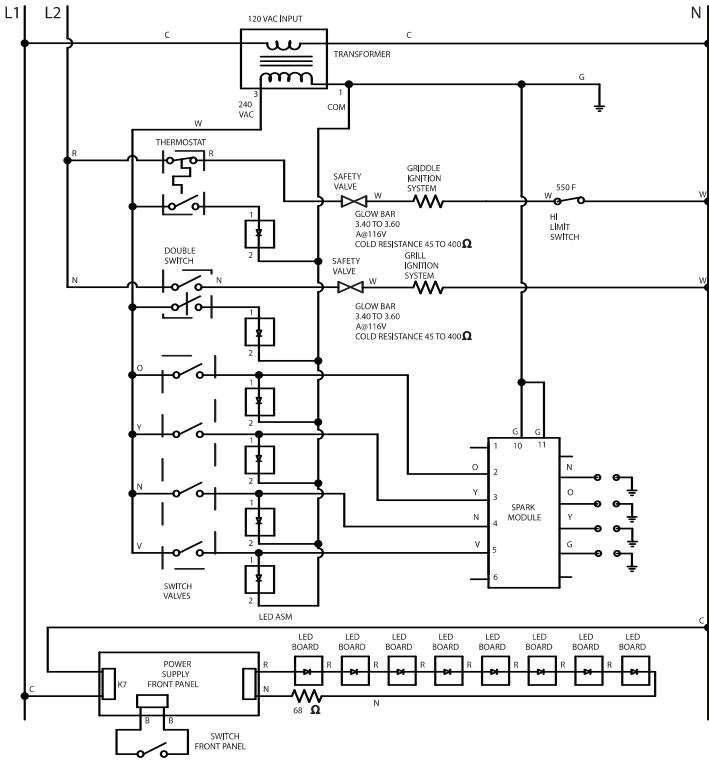


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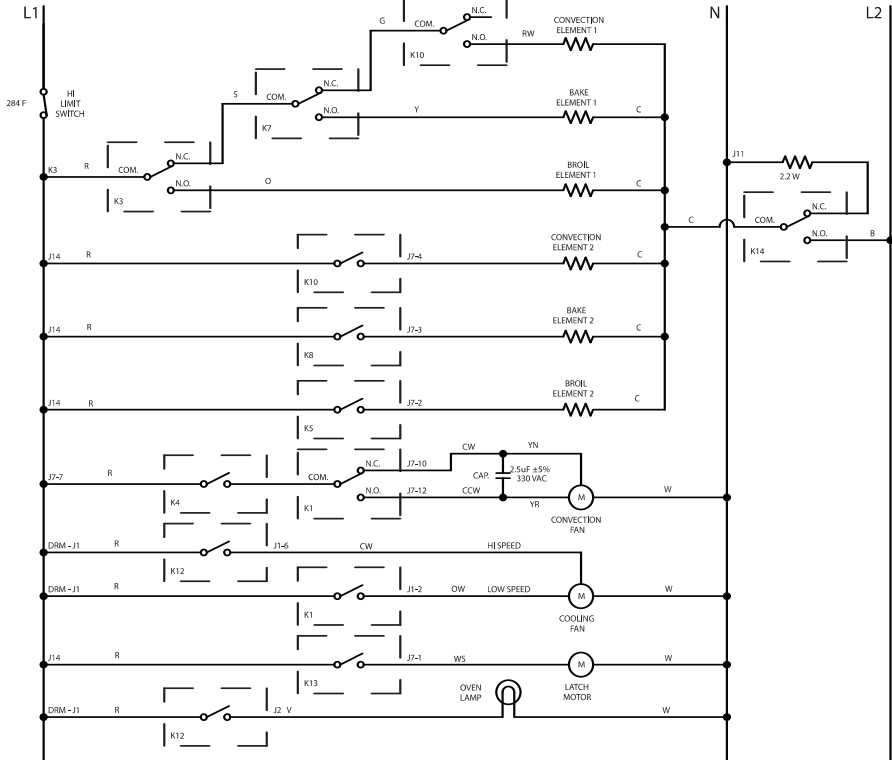
WIRING DIAGRAM  
WARNING  
POWER MUST BE DISCONNECTED  
BEFORE SERVICING THE APPLIANCE

ELEMENT	ELEMENT WATTAGE	
	MAIN	COMPANION
BROIL 1	3000W, 18.78 Ω	2100W, 26.5 Ω
BROIL 2	1000W, 55.22 Ω	1400W, 39.7 Ω
BAKE 1	1200W, 46.6 Ω	1000W, 55.9Ω
BAKE 2	1000W, 55.9 Ω	600W, 93.2 Ω
CONVECTION 1	1600W, 34.95 Ω	1425W, 38.97Ω
CONVECTION 2	900W, 62.14 Ω	800W, 69.26 Ω

WIRE COLORS	
BLACK	B
BROWN	C
BLUE	N
GREEN	G
ORANGE	O
PURPLE	V
RED	R
YELLOW	Y
GREY	S
WHITE	W

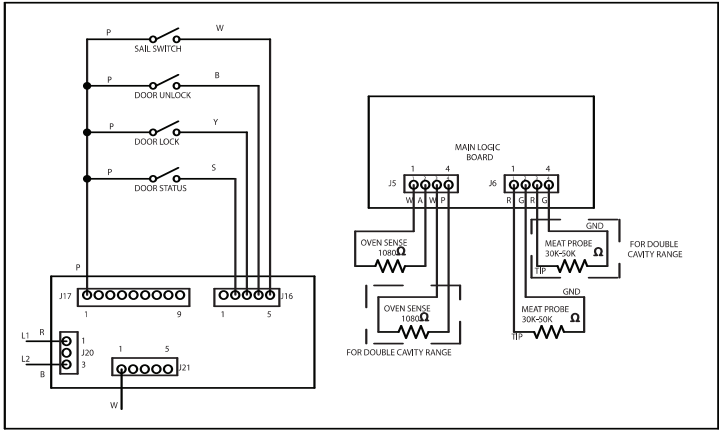


LADDER FOR ELECTRICAL COMPONENTS



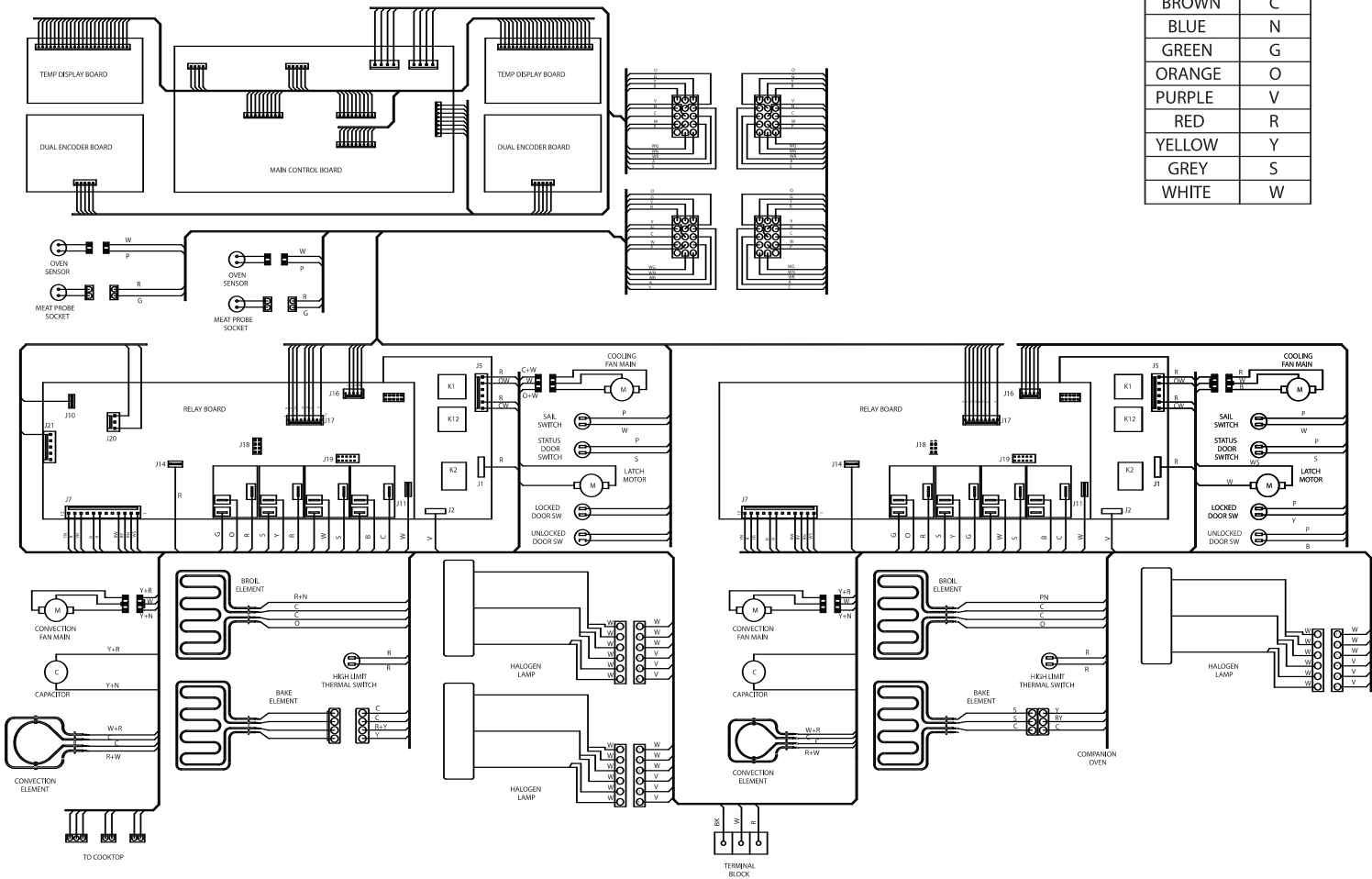
LADDER FOR RELAYS

ERC BOARD



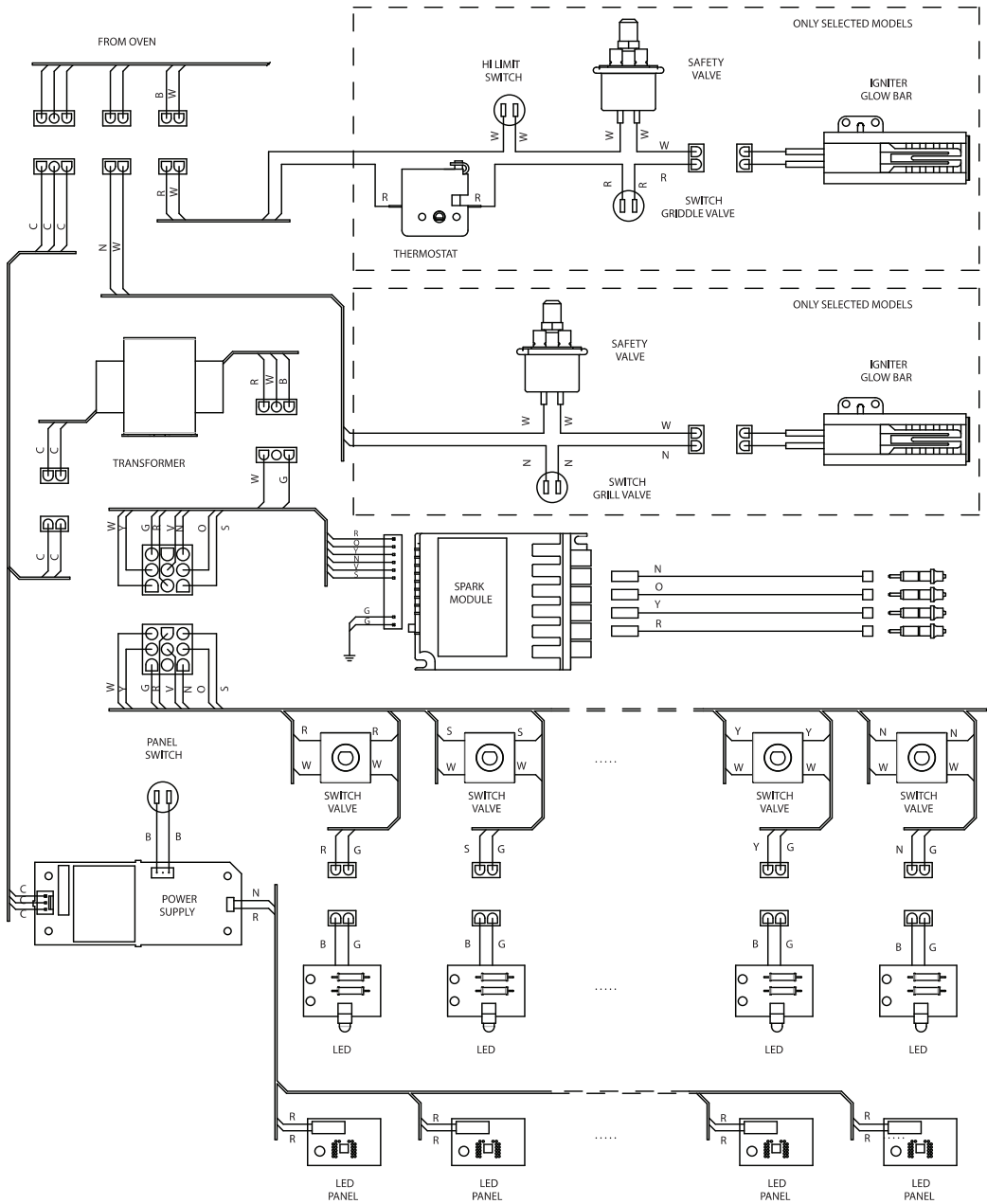
	COMPONENT OPERATION DURING GIVEN MODE											
	ELEMENTS						FANS				Oven Lamp	Latch Motor
Mode	Bake 1	Bake 2	Broil 1	Broil 2	Conv 1	Conv 2	Conv CW	Conv CCW	Cooling Lo	Cooling Hi		
Preheat (Bake, Conv. Bake, Conv. Roast)	Cycling	Cycling	Cycling	Cycling	Off	Cycling	Off	On	On (above 200°F)	Off	On	Off
Bake						Off		Off				
Conv. Bake	Off	Off	Off	Off	Cycling	Cycling	Cycling	Cycling				
Broil Hi			Cycling	Cycling	Off	Off	Off	Off				
Broil Lo												
Conv. Broil							Cycling	Cycling				
Proof			Off	Off			Off	Off	Off	On	Cycling	On
Clean	Cycling	Cycling	Cycling	Cycling			Off	Off			Off	

OVEN DIAGRAM  
WARNING  
POWER MUST BE DISCONNECTED  
BEFORE SERVICING THE APPLIANCE



WIRE COLORS	
BLACK	B
BROWN	C
BLUE	N
GREEN	G
ORANGE	O
PURPLE	V
RED	R
YELLOW	Y
GREY	S
WHITE	W

COOKTOP DIAGRAM



WIRE COLORS	
BLACK	B
BROWN	C
BLUE	N
GREEN	G
ORANGE	O
PURPLE	V
RED	R
YELLOW	Y
GREY	S
WHITE	W